Chap. 6 Risk Management Analysis

industry risk, financial risk and operating risk. The Company realizes the damage these risks may cause and therefore has established a risk management committee to set policies in order to minimize the impact on the Company's operations from any incidents.

Industry Risk

Technology Changes and Development

1. Current status

(1) Current status

WBA is a communications technology based on orthogonal frequency-division multiplexing (OFDM) and is capable of providing speeds of up to 10 Mbps on the equivalent frequency bandwidth of 3G's 5MHz. Considered to be a foundation for next-generation mobile broadband communications, WBA poses a reasonable threat to 3G technology.

On July 26, 2007, the National Communications Commission (NCC) released six regional licenses -- three for the north and three for the south. One or two of the WiMAX licensees are expected to launch their services in 2009. However, as interoperability problems between WiMAX base stations and customer premises equipment (CPE) have not been solved, CPE options will be very limited. CPE roaming between WiMAX networks operated by different vendors is still far from achievable in 2009.

(2) Countermeasures

The technology for 3.5G High Speed Downlink Packet Access (HSDPA), in comparison, is mature and has been commercialized. The speed of the connection throughput for 3.5G is 7.2 Mbps and should rise to 14.4 Mbps, and even 28.8 Mbps in the near future, placing it on the same level as WBA. In the short term, HSDPA should be a more commercially competitive technology than WBA.

TWM has therefore aggressively deployed 3.5G technology and promoted mobile broadband access services since late 2007. In 2009, TWM will continue to deploy more 3.5G base stations and provide higher speed mobile internet services. 3G extended long-term evolution (LTE) technology is another promising technology that could provide the same services as WiMAX. The Company is fully involved in this technology's development and evaluation is ongoing.

To cope with long-term challenges, TWM hired a leading foreign telecom firm and a world-renowned consulting agency for the past two years to analyze industry trends and formulate effective strategies to cope with the dynamic changes in the market. The Company has drawn up a long-term plan to strengthen its wireless broadband and multimedia services.

2. Rising popularity of Internet protocol

(1) Current status

The popularity of internet protocol (IP) has revolutionized the telecommunications business and network infrastructure, giving rise to increased communications traffic. Among these changes, the introduction of voice-over IP (VoIP) service has had the greatest impact on fixed line operators' voice revenue.

The increasing popularity of wireless local area networks (WLAN) could also facilitate the deployment of voice-over WLAN (VoWLAN) and affect mobile operators' future voice revenue.

(2) Countermeasures

The necessity of building an IP core network infrastructure based on next generation network (NGN) is an urgent task. The Company has organized an IP Infrastructure Committee to study and analyze the demand, costs and benefits of developing an IP multimedia subsystem (IMS) and IP core access and transmission technologies.

The Company has started many IMS application trials in the lab to keep abreast of the technology's development and may extend the scope of the trials in 2009 to outside the lab. It has also begun research on advanced optical network transmission technology and has already deployed the optical network backbone in certain areas. It will continue conducting research on optical packet metro Ethernet technologies and introduce the newest cost-effective optical network backbone at an appropriate time in the future.

3. Digital convergence

(1) Current status

The mobile and fixed line communications and media industries, which have similar service models and technologies, have been on a converging trend in recent years. This has facilitated the exchange and transmission of digital content and services among different carriers, systems and platforms, and is a factor for potential consolidation in the telecommunications and broadcasting industries.

(2) Countermeasures

The Company merged Taiwan Fixed Network (TFN) and Taiwan Fixed Network Media (TFNM, formerly known as Fu Yang Media), and acquired Taiwan Telecommunication Network Services (TTN) in 2007 to enhance the Company's competitiveness in the digital era. In 2008, TWM integrated the group's resources to facilitate research and development into digital convergence and launch timely services. As mentioned, the Company has hired a renowned global consulting agency, which is also tasked with analyzing trends and issues relating to fixed-mobile convergence (FMC), as well as implementing measures to address the trend toward communications and media convergence.

Regulatory Changes

1. NCC shelves review of Communications Administration Act

(1) Current status

In line with the trend toward digital convergence, the first NCC board submitted a draft of the "Communications Administration Act" to the Cabinet for review in December 2007. The Cabinet rejected the draft and recommended that the NCC revise and adopt more progressive regulatory changes. After the second NCC board took office in August 2008, the new commission decided to prioritize the revision of the "Cable Radio and Television Act," "Radio and Television Act" and "Satellite Broadcasting Act" – including issues on foreign ownership limitation and consolidation of CATV operating regions -- followed by a review of the draft "Communications Administration Act." This is to cushion the potential impact from the proposed convergence bill, which would eliminate the boundaries between the broadcasting and communications industries, and regulate these industries by infrastructure, service platform and content instead.

(2) Countermeasures

The NCC has taken a more progressive approach in amending communications and broadcasting regulations to minimize their impact on the industry. The Company will closely monitor this through continued communications with the NCC and make appropriate recommendations from the industry standpoint.

2. Reversal of ruling prohibiting CHT from investing in Global Mobile Corp.

(1) Current status

On October 17, 2008, the NCC Appeals Committee reversed its ruling prohibiting Chunghwa Telecom (CHT) from purchasing a 15% stake in Global Mobile Corp. Consequently, the new ruling allows CHT to continue providing Global Mobile with working capital and technology support.

(2) Countermeasures

WiMAX's promise of high-speed broadband access is similar to other technologies in the market. However, WiMAX operators have yet to come up with a proven business model and continued delays in their commercial launch has resulted in declining market interest. The Company will closely monitor developments, while evaluating different business models – 3.5G (HSDPA), 3.9G (LTE) and WiMAX – to provide customers a variety of convenient, steady and high-speed wireless broadband choices.

3. Small-scale testing of femtocell

(1) Current status

Femtocell is a new communications technology whose specifications and effect are still being developed and defined. Because it is an evolving technology, the NCC favors asking operators interested in introducing femtocell to start by conducting small-scale experiments. Once it is established that femtocell radiation does not affect 3G signals, the NCC would decide whether telecom operators could deploy femtocell on a wider scale. Because femtocell can help transform fixed line bandwidth to facilitate indoor transmission of 3G signals, its commercialization could heat up competition in the FMC market.

(2) Countermeasures

The NCC has set up a special research team to study this new technology and service and has been hosting conferences for data collection. The Company will adhere to domestic/overseas best practices while keeping the Company's operational goal in mind when issuing opinions to the NCC, and watch these developments closely.

4. Mobile TV policies

(1) Current status

On February 26, 2008, the NCC announced on its website that it was soliciting public opinion on two proposed policies – "Using existing communications platforms to provide mobile TV services" and "Opening licensing for mobile TV operators." The NCC tentatively plans to implement the two policies at the same time, i.e., launching mobile TV services using existing WiMAX and 3G platforms and promoting new business models by issuing new licenses. The latter will likely result in keen bidding for licensing to grab a slice of the mobile TV market.

(2) Countermeasures

As mobile TV is proven to work well on 3G networks, the Company supports the policy on "Using existing communications platforms to provide mobile TV services." As for new mobile TV licenses, the Company will recommend that the NCC discuss the issue thoroughly with incumbent operators to ensure full spectrum utilization.

5. Pricing right and call revenue of CHT's fixed-line with 070 pre-fix VoIP calls

(1) Current status

NCC regulations state that starting in 2011, the right to determine pricing and call revenue generated from fixed to mobile traffic will be returned to fixed line operators. However, mobile operators will retain the right to set prices for CHT's fixed line with 070 prefix VoIP calls until 2011. This is to ensure fair market competition by preventing CHT from using the right to set prices to dominate the local call market.

(2) Countermeasures

The Company is in favor of the above regulation as it can reduce unfair competition.

6. Taipei City Government outsourcing FTTx deployment

(1) Current status

The Taipei City Government plans to utilize its sewer system for optical fiber deployment in order to provide cheaper high-speed broadband services. This could facilitate FTTx construction in Taiwan and reduce CHT's dominance. However, interested parties are sidelined given the enormous investment required (not less than NT$8bn), numerous restrictions, and short bidding preparation time.

(2) Countermeasures

According to the Industrial Technology Research Institute, the winning bidder must complete 80% of the household coverage within two years, which would be difficult to achieve. Furthermore, the payback period is conservatively estimated to be up to 15 years. The Company will evaluate the project's final tender requirements before deciding whether to submit a bid.

7. CATV required to reduce endorsements and provide guarantees on advanced receipts

(1) Current status

On reviewing the license renewal applications of two cable TV system operators (SO), the NCC found that the two SO's guarantees of debts for their foreign-invested parent companies were excessively high. The SOs were required to improve their financial structure and lower their gearing by 20% within two years, as well as provide financial guarantees on advanced receipts from customers to protect subscriber interests, within six months upon approval of their new licenses. These requirements will increase the financial and operational costs of CATV operators.

(2) Countermeasures

The Company's CATV operators do not have the same financial problem given the Company's sound financial position and corporate governance. The Company will comply with NCC's policy to provide financial guarantees through coordination with banks in the interest of better consumer protection.

Financial Risk

Impact of interest rate fluctuations

The Company has pegged the floating interest rate for its first unsecured corporate bonds with a total value of NT$7.5bn at 2.25% and 2.45% through interest rate swap (IRS) agreements upon issuance. All other issued corporate bonds have fixed interest rates. The Company is thus completely hedged against interest rate fluctuations.

The IRS is settled semi-annually and is classified as a "cash-flow hedge." Based on the fair market valuation provided by banks, as of January 23, 2009, the Company has a mark-to-market gain of around NT$55m from the IRS. This unrealized gain does not affect the income statement and is instead booked under shareholders' equity.

The main factors affecting mark-to-market estimations are the US interest rate, the yield curve and the US$ to NT$ interest rate differential. When the bond matures and the IRS agreement ends, the gain/loss associated with the IRS will cease.

Impact of exchange rate fluctuations

The Company's main business is providing mobile phone services and its main service area is Taiwan. Except for its international roaming business, all operating revenues are denominated in NT dollars. Some of the Company's capital expenditures are denominated in Euros and US dollars. To minimize the impact from foreign exchange rate fluctuations, the Company hedges risks through foreign currency deposits.

The Company's foreign exchange loss totaled NT$7.868m as of December 31, 2008. In summary, exchange rate fluctuations had a minimal impact on the Company.

Impact of inflation

Inflation had a minimal impact on the Company's operating performance in the past year up until the publication date.

Operating Risk

Investment Policy and Reasons for Gains & Losses for High-Risk/High-Leverage Financial Products, Derivatives, Loans to Others, and Guarantees of Debts

1. **The Company did not engage in high-risk, high-leverage financial investment in recent years.**

2. **The Company passed the "Rules and Procedures on Lending and Making Endorsement/Guarantees" to supervise financing and endorsement activities. As the counterparties in its loans and guarantees are all its subsidiaries, there is minimal operating risk.**

3. **The derivative product positions the Company held in 2008 were for purposes other than trading. The interest rate swap contracts were signed to minimize interest rate risks of floating-rate bank borrowings. The Company's hedging strategies are meant to avoid cash flow risks. No substantial earnings/losses resulted from the derivative transactions.**

Mergers and Acquisitions

1 Merger and acquisition update

(1) Taiwan Fixed Network Co., Ltd. (TFN), a subsidiary of the Company, merged Taiwan United Communications Co., Ltd. on January 1, 2008.

(2) TFN Investment Co., Ltd. (TFNI), a subsidiary of the Company, completed its acquisition of TFN Media Co., Ltd. (TFNM) by purchasing the remaining 6.94% stake at NT$33.46377 per share on January 30, 2008.

(3) TFNM and Fu Sin Media Technology Co., Ltd. (FSMT), subsidiaries of the Company, acquired 26.66% and 3.34% of Phoenix Cable TV Co., Ltd. at NT$58.7 per share on January 28, 2008 and on April 8, 2008, respectively. Together, TFNM and FSMT owned 100% of Phoenix Cable TV Co., Ltd. after the transaction.

(4) TWM Holding Co., Ltd., a subsidiary of the Company, acquired 100% of Hurray! Times Communications (Beijing) Ltd. on April 24, 2008.

(5) TFN merged Taiwan Telecommunication Network Services Co., Ltd. on August 1, 2008.

(6) VoPier Communications (Taiwan) Co., Ltd., a subsidiary of the Company, merged the former Taiwan Teleservices & Technologies Co., Ltd. (TT&T) and renamed as TT&T on September 1, 2008.

(7) The Company merged TransAsia Telecommunication, Inc. (TAT) on September 2, 2008.

2. Expected benefits and potential risks

(1) Expected benefits:
The mergers and acquisitions should contribute to corporate integration and enhance operating efficiency.

(2) Potential risks:
There are no potential risks involved as the Company owned controlling interests in the above mentioned companies and had control over their operations prior to the mergers.

(3) Countermeasures:
Not applicable.

Supply and Distribution Concentration (Supplier and Customer Risk)

The Company's main supplier is Chunghwa Telecom (CHT) for network interconnections and leased lines. These costs accounted for 20.98% of total operating costs in 2008. The Company has been increasing usage of leased lines supplied by other fixed-line operators (e.g. Taiwan Fixed Network) to diversify supplier risk.

On the revenue side, CHT is the Company's largest source of interconnection revenue. However, the Company has a very diverse subscriber base for its mobile services. As such, there is no customer concentration risk.

1. Top supplier (over 10% of total operating costs)

2008			2007			Reason for change
Company	Amount (NT$'000)	% of operating costs	Company	Amount (NT$'000)	% of operating costs	
Chunghwa Telecom	5,054,973	20.98%	Chunghwa Telecom	4,968,191	22.21%	Higher interconnecting charge paid to CHT in 2008

2. Top customer (over 10% of total revenue)

2008			2007			Reason for change
Company	Amount (NT$'000)	% of revenue	Company	Amount (NT$'000)	% of revenue	
Chunghwa Telecom	8,956,659	16.49%	Chunghwa Telecom	9,194,171	17.93%	Lower interconnecting revenue generated form CHT

Impact of changes in brand image to the Company's risk management policies None

Expected benefits and risks related to plant facility expansions Not applicable

Significant changes in shareholding of directors, supervisors and major shareholders

Changes in the shareholding of directors, supervisors and major shareholders, which are detailed in Chapter 4, had minimal impact on the Company.

Changes in management control Not applicable

Significant Lawsuits and Non-litigious Matters

Summary of all material litigations, administrative proceedings, and other non-litigious matters in which the Company or its directors, supervisors, managers, major shareholders (with more than 10% shareholding), or subsidiaries were involved within the past year up to the report's publication date that may have a significant impact on shareholders' equity or the share price is listed below:

1. The Company

The Fair Trade Commission (FTC) fined the Company NT$3 million as administrative penalty for the "401/801 rate plan" advertisement.

Parties involved: The Company is the defaulting party.
Date of filing of administrative appeal: February 19, 2008
Grounds for appeal:
The Company's "401/801 rate plan" was regarded as misleading advertising by the FTC, which ordered the Company to cease using the said commercial and meted out a fine of NT$3 million as penalty. The Company disagreed with the FTC's decision and has filed an administrative appeal.
Status: The Company has filed an administrative appeal to the Executive Yuan.

2. **The Company's directors, supervisors, managers and major shareholders (with more than 10% shareholding)** None

3. **The Company's subsidiaries**

Taiwan Fixed Network Co., Ltd. (TFN)
The lawsuit pertaining to land usage fee between TFN and Kaohsiung City Government
Parties involved: TFN is the plaintiff and Kaohsiung City Government is the defendant.
Amount claimed: NT$13,094,147
Date of filing: December 24, 2007
Grounds for lawsuit: TFN laid pipes under land which is owned by the Kaohsiung City Government. In accordance with regulations pertaining to usage fees related to laying of pipes under land owned by the city government, land usage fees from 2002 to 2004, as calculated by the Kaohsiung City Government, came up to NT$13,094,147. TFN was ordered to pay this amount in 2007; however, TFN felt that this administrative disposition was illegal and decided to file an administrative appeal with the Ministry of Finance. The ministry dismissed TFN's appeal. This was followed by an unsuccessful appeal before the Kaohsiung High Administrative Court. TFN has filed an appeal with the Supreme Administrative Court.
Status: This case is pending in the Supreme Administrative Court.

Risk Management

Risk Management Policies

1. **Promote a risk management based business model**

2. **Establish a risk management mechanism that can effectively cite, evaluate, supervise and control risks**

3. **Create a company-wide risk management structure that can limit risks to an acceptable level**

4. **Introduce best risk management practices and continue improving**

Risk Management Structure

The Company's risk management structure is made up of three committees. The functions of each committee are as follows:

(1) Operations and Management Committee: Conduct periodic reviews of each business group's operating target and performance to ensure the Company's guidance and budget execution.
(2) Safety and Health Committee: Tasked with supervising and reducing potential risks to workers' health and safety.
(3) Information Security Management Committee: Supervise important information assets for confidentiality, integrity, availability, and regulations compliance in order to control and reduce operational risks to an effective and reasonable level.